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(21) International Application Number: <b>PCT/US97/00767</b> (22) International Filing Date: <b>21 January 1997 (21.01.97)</b>  (30) Priority Data: 08/589,915           23 January 1996 (23.01.96)   US 08/618,957           20 March 1996 (20.03.96)    US 08/713,296           13 September 1996 (13.09.96) US  (71) Applicant: <b>PROGENITOR, INC. [US/US]; 1507 Chambers Road, Columbus, OH 43212 (US).</b>  (72) Inventors: <b>SNODGRASS, H., Ralph; 650 Retreat Lane, Powell, OH 43065 (US). CIOFFI, Joseph; 1180 Bayboro Drive, New Albany, OH 43054 (US). ZUPANCIC, Thomas, J.; 501 Park Boulevard, Worthington, OH 43085 (US). SHAFER, Alan, W.; 256 Lakeview Drive, Lancaster, OH 43130 (US). MIKHAIL, Adel, A.; 4511 Loos Circle East, Columbus, OH 43214 (US). BARUT, Bruce, A.; 187 West Riverglen Drive, Worthington, OH 43085 (US).</b>  (74) Agents: <b>POISSANT, Brian, M. et al.; Pennie &amp; Edmonds, 1155 Avenue of the Americas, New York, NY 10036 (US).</b>		(81) Designated States: <b>AL, AM, AU, AZ, BA, BB, BG, BR, BY, CA, CN, CU, CZ, EE, GE, HU, IL, IS, JP, KG, KP, KR, KZ, LC, LK, LR, LT, LV, MD, MG, MK, MN, MX, NO, NZ, PL, RO, RU, SG, SI, SK, TJ, TM, TR, TT, UA, UZ, VN, ARIPO patent (KE, LS, MW, SD, SZ, UG), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG).</b>  Published <i>With international search report.          Before the expiration of the time limit for amending the claims and to be republished in the event of the receipt of amendments.</i>
(54) Title: <b>METHODS FOR USING THE OBESE GENE AND ITS GENE PRODUCT TO STIMULATE HEMATOPOIETIC DEVELOPMENT</b>  (57) Abstract  <p>The present invention relates to the expression of various forms of a novel receptor in hematopoietic and endothelial cells. A variant form of this receptor has been detected in brain cells and shown to bind to the <i>obese</i> gene product, leptin. In particular, the present invention relates to methods of using leptin to stimulate the growth and development of receptor-positive hematopoietic and endothelial cells <i>in vitro</i> and <i>in vivo</i>. In addition, this receptor is selectively expressed in hematopoietic progenitor cells with long-term repopulating potential. Thus, agents that specifically bind to this receptor may be used to identify and isolate progenitor cells for a variety of clinical applications.</p>		

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